

M E D I C A L  
T R A N S A C T I O N S.

VOLUME THE THIRD.



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# M E D I C A L T R A N S A C T I O N S,

PUBLISHED BY THE  
COLLEGE OF PHYSICIANS

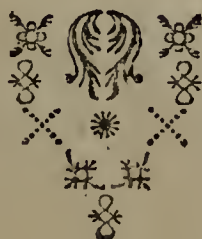
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L O N D O N.

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VOLUME THE THIRD.

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L O N D O N:

Printed for S. BAKER and G. LEIGH,  
and J. DODSLEY. MDCCLXXV.



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## ADVERTISEMENT.

IT being uncertain, when the College of Physicians will go on with the design of publishing Medical Papers, it is thought proper not to delay any longer the publication of the following, which have been read before the College, as a part of the third volume of Medical Transactions.



THE LITTLE WHITE

It is a small, white, and very  
light of color, with a soft  
texture, and a very fine  
grain. It is a very good  
material for the manufacture  
of paper, and is very  
suitable for the manufacture  
of paper, and is very  
suitable for the manufacture  
of paper.

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M E D I C A L  
T R A N S A C T I O N S.

- I. *A Letter to Dr. HEBERDEN, concerning the Angina Pectoris; and an Account of the Dissection of one, who had been troubled with that Disorder.*

Read at the COLLEGE, Nov. 17, 1772.

SOON after the publication of the second volume of the Medical Transactions I received the following anonymous letter.

“SIR,

SEEING, among the extracts from the Medical Transactions in the Critical Review of last month, your account of a disorder, which you term the

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*angina pectoris*, I found it so exactly correspond with what I have experienced of late years, that it determined me to give you such particulars, as I can recollect at those times to have felt; more especially as some sensations have frequently led me to think, that I should meet with a sudden death. I am now in the fifty-second year of my age, of a middling size, a strong constitution, a short neck, and rather inclining to be fat. My pulsations at a medium are about 80 in a minute; the extremes, when in a perfect state of health, beyond which I scarcely ever knew them, 72 and 90. I have enjoyed from my childhood so happy a state of health, as never to have wanted, nor taken, a dose of physic of any kind for more than twenty years: as well as I can recollect, it is about five or six years since, that I first felt the disorder which you treat of; it always attacked  
me

me when walking, and always after dinner, or in the evening. I never once felt it in a morning, nor when sitting, nor in bed. I never ride, and seldom use a coach, but it never affected me in one. The first symptom is a pretty full pain in my left arm a little above the elbow; and in perhaps half a minute it spreads across the left side of my breast, and produces either a little faintness, or a thickness in my breathing; at least I imagined so, but the pain generally obliges me to stop. At first, as you observe, it went off instantaneously, but of late by degrees; and if, through impatience to wait its leaving me entirely, I resumed my walk, the pain returned. I have frequently, when in company, borne the pain, and continued my pace without indulging it; at which times it has lasted from five to perhaps ten minutes, and then gone off, as well as I can recollect, rather suddenly, as it



came on, than lessening gradually. Sometimes I have felt it once a week; other times a fortnight, a month, or a longer time, may elapse without its once attacking me; but, I think, I am more subject to it in the winter, than in the summer months. As, when the pain left me, I had no traces of having the least disorder within me of any kind, either from spitting blood, or any corrupted matter, nor ever entertained the least thought of any abscess being formed, I never troubled myself much about the cause of it, but attributed it to an obstruction in the circulation, or a species of the rheumatism.

I SHALL now proceed to acquaint you with those sensations, which to me seem to indicate a sudden death; but which, not being concomitant with the above mentioned disorder, I am ignorant whether they are to be attributed to it or not. I have often felt,  
when



when sitting, standing, and at times in my bed, what I can best express by calling it an universal pause within me of the operations of nature for perhaps three or four seconds; and when she has resumed her functions, I felt a shock at the heart, like that which one would feel from a small weight being fastened by a string to some part of the body, and falling from the table to within a few inches of the floor. At times it will return two or three times in half an hour; at other times not once a week; and sometimes I do not feel it for a long time: and I think I have been less subject to it for a year past, than for several former ones. As you have mentioned several, who within your knowledge have died suddenly, that were troubled with the *angina pectoris*, I suspect they were subject to what I have delineated, as I think that much more likely to occasion a sudden death, than either of

the causes to which you attribute it. But be the cause, what it may, if it please God to take me away suddenly, I have left directions on my will to send an account of my death to you, with a permission for you to order such an examination of my body, as will shew the cause of it; and, perhaps, tend at the same time to a discovery of the origin of that disorder, which is the subject of this letter, and be productive of means to counteract and remove it.

I am, Sir, Yours,

UNKNOWN.”

London,  
April 16, 1772.

THE foregoing letter seems to have been written in such a sensible and natural manner, that the writer would probably neither mistake his own feelings through fancy, nor misrepresent them

them through affectation; and therefore I judged it worthy to be communicated to the College, both in justice to the temper and judgement of the author, and as a just and original picture of this disorder.

IN less than three weeks after he had sent this letter, I was informed, that in the midst of a walk, which he was taking after dinner, he leaned against a post, and begged a passenger to assist him, by whose help he reached a neighbouring house, where he vomited much; and was bled, but died in less than half an hour. At the same time I was acquainted, that, by a paper found in his will, if he died suddenly, he had desired, that I might immediately have notice of it, in order to have the body opened and examined. I used my best endeavours, that such a benevolent intention should not be frustrated, by procuring that experienced



rienced and accurate anatomist Mr. J. Hunter to open the body, which was done within 48 hours after his decease. But upon the most careful examination no manifest cause of his death could be discovered: the seat of the disease having been, as we may suppose, in some of those parts, the functions of which being not well understood in life, we can find no traces of their disorders after death.

IN general the viscera were well formed, and in a sound state, with marks of great robustness. The contents of the thorax were examined with peculiar attention, particularly the heart with its vessels and valves, and were all found to be in a natural condition, except some few specks of a beginning ossification upon the aorta, and some adhesions of the lungs to the pleura on the left side. The left ventricle of the heart was remarkably strong and thick, and as perfectly empty



empty of blood, as if it had been washed. Nothing extraordinary could be perceived in the brain, unless that there was rather more water in the ventricles, than is common for such an age. It was very remarkable, that the blood was no where coagulated, and did not coagulate even after being more than two hours exposed to the air; but at the same time could not be called perfectly fluid; being of the consistence of thin cream; but there was no separation of any of its component parts.

THIS anatomical examination, for which I acknowledge myself much indebted to the manly sense and benevolent spirit of this worthy man, though it do not inform us, what the cause of the disease was, will however have its use by informing us what it was not. For since it was not owing to any male-conformation, or morbid destruction of parts necessary to life,  
we

we need not despair of finding a cure: and as there were no appearances of inflammation or scirrhus or abscess, which in the former volume I mention as possible causes; we must not seek the remedy in bleeding and purging, and lowering the strength, but rather in the opposite class of medicines, which are usually called nervous and cordial, such as relieve and quiet convulsive motions, and invigorate the languishing principle of life.

THE sensation, described in the letter, of an apparent suspension of life for a few seconds, is what I do not remember to have ever heard mentioned by any patient besides this; and though I say in the former paper upon this disorder, that I have seen it in twenty persons, I may truly say, that I have seen it in fifty. In this particular case, that universal pause of the vital actions is said to have been felt, when the patient was sitting, standing, and  
at

at times in his bed. Now as he was seized while he was walking with those symptoms which ended in his death (which I remember to have happened to others of his fellow sufferers) it may seem probable, that he lost his life rather by an extraordinary aggravation of the *angina pectoris*, than of this particular sensation: but this must be decided by future experience.



II. *A Letter from Dr. WALL to Dr. HEBERDEN, on the same Subject.*

Read at the COLLEGE, Nov. 17, 1772.

Worcester, May 30, 1772.

A FEW days ago, I was permitted to inspect the body of a person who died of the disorder, which you have described in N<sup>o</sup> VI. Vol. II. of the Medical Transactions, and named the *angina pectoris*. As this is the only opportunity I have ever had of enquiring into the cause of that complaint; and as you yourself acknowledge that you never saw any one opened, who had died of this disease, I hope the following account, imperfect as it is, will not be entirely unacceptable to you or the College.

To the description you have given of the disease, I have nothing to add; and shall therefore only beg leave to observe,



observe, that in most, if not all, the persons whom I have attended in it, the pain under the sternum constantly extended itself on each side across the breast in the direction of the pectoral muscle, and affected one, or commonly both arms, exactly in the place where the muscle is inserted into the os humeri. You mention this symptom only cursorily; but I have found it to be so general, that I have been induced to place it amongst the principal diagnostics.—I have seen 12 or 13 persons afflicted in this manner, of which number one, who applied early in the disease, was relieved considerably by the use of antimonial medicines joined with the fœtid gums. He is still living; and goes about with tolerable ease. Two were carried off by other disorders; all the rest died suddenly.

THE person, who is the subject of this paper, was a short, but well-made  
 7 man,

man, inclined to be fat; a circumstance which you have taken notice of. He was 66 years of age when he died, and had been afflicted with these complaints 6 or 7 years. In the former part of his life, he had had several very severe attacks of the rheumatism; and therefore, this pectoral muscle appearing to be so particularly affected, this disease at its first seizure, and for a considerable time afterwards, passed under the same name; and therefore was not much attended to\*. At first, for two or three years, he only felt a slight pain and tightness across his breast and arms, upon walking a little faster than ordinary. By slow and very imperceptible degrees,

\* This circumstance has usually made both the patients themselves, and those who attended them, imagine the complaint to be merely muscular; and accordingly it has been named, gouty, rheumatic, or scorbutic: but they could hardly have been so deceived, had they considered, that in the present case the pain is very deep seated below the sternum.

this

this increased; till at last it affected him so much, that he could not walk but in a very slow pace, and with great difficulty; he could not go up stairs, nor lie down, nor get up out of his bed, without bringing on a violent dyspnœa, or rather a sense of suffocation; and if he strained for a stool, the capacity of the thorax being then straitened by the compression of the abdominal muscles, and retention of the breath, he was almost ready to expire: so that the medicines which relieved him most, were such as kept his body very open; and these gave him ease, not so much by the evacuation, as making the fæces come away with more facility. He was always better for a day or two after bleeding. He was always free from any cough till towards the latter end of his illness; and then a very troublesome one came on, attended with a hoarseness; and he then expectorated a thin frothy



frothy phlegm, sometimes a little tinged with blood, and towards the end mixt with some matter of a purulent appearance. His pulse was never irregular, but always small; and during the paroxysms, it sunk so much under the finger, that it could hardly be felt. He died after having struggled in the fit about two hours.

UPON attempting to open the thorax, the cartilages of the ribs were found so much indurated, that it was exceedingly difficult to divide them by the knife. This ossification was most remarkable in the sixth rib on each side, but was much the strongest on the left; being there full as hard as the bone itself.—Upon raising the sternum, the surface of the pericardium for a large extent was covered with fat, nearly an inch in thickness. The lungs were greatly distended with very black blood, they were full and hard; and in the cavity of the thorax was a  
very



very considerable quantity of an aqueous fluid.

UPON cutting into the lungs, a frothy mucus, mixt with something purulent and of a foetid smell, issued from every part, but principally from the divided bronchia: this matter was more in quantity from the left lobe; but no cavity, ulcer, or abscess, were observed any where.—Upon opening the pericardium, the heart appeared of an uncommon size, and was covered with a great quantity of fat; the pericardium contained not less than a pint of fluid.—Upon examining the heart, no part appeared diseased, till we opened the left ventricle; and there, the semilunar valves, placed at the origin of the aorta, were found to be perfectly ossified. They did not, as usual, lie flat upon the divided orifice of the vessel; but stood erect, and appeared to be immoveable. They were entirely ossaceous through their

VOL. III. C whole

whole substance; but the ossification was formed unevenly, and as it were in spines, some parts being near a line in thickness, and others thin like a connecting membrane, but perfectly boney.—The aorta was at its curvature considerably enlarged; and for near an inch from the heart, was in part ossified; there being several bony scales or laminæ in it, but not connected with one another.

IN considering the morbid appearances discovered by dissections, it is necessary to distinguish accurately the cause from the effects; otherwise we shall form a wrong idea of the disease, and reason injudiciously. Thus in the present case, though the pressure on the heart and lungs, from an extraordinary quantity of fat, a large effusion of liquids into the cavity of the thorax, and within the pericardium, and a vast accumulation of blood in the substance of the lungs themselves, must necessarily



necessarily have much impeded the transmission of blood through those parts, and thereby have occasioned dyspnœa, &c. ; yet these, though they greatly aggravated the symptoms, were by no means the cause of the disease. The origin of this disorder is here evidently to be traced from the induration of the semilunar valves ; which existed, probably, in a less degree for several years, and increased gradually till it came to a boney hardness and immobility. From the instant this rigidity in the valves first began, the circulation through the heart, and consequently through the lungs, was in some degree impeded: but when at last they became so much indurated as to be hardly moveable, the blood must have been propelled into the aorta with great difficulty ; and probably part of it regurgitated again into the ventricle during the systole of the artery. By this obstacle to the circu-

C 2
lation,



lation, the heart and lungs were loaded and distended to the utmost stretch ; and by this distension, when it arrived at a certain point, the serous parts of the blood were squeezed out through the coats of the vessels, and a hydrops pectoris et pericardii was brought on. Though this effusion of fluids must have very much straitened the capacity of the thorax, and caused an additional pressure on the heart, yet cannot the symptoms of the disease, with propriety, be deduced from hence ; since the sense of suffocation on motion, &c. probably existed long before any such effusion came on ; nor would the patient have been much relieved, or for any length of time, could that extravasated serum have been let out by any operation.

It is possible, that this induration of the semilunar valves may not be always the cause of this disease ; though it seems not improbable, that some

mal-formation in the heart or vessels immediately proceeding from it may be so. Indeed, when we consider how frequently such indurations in the valves of the heart have been found\*; that the disease in question does not come on till a person is advanced in years, and consequently till a rigidity in every part naturally comes on; we shall I think be inclined to imagine, that a præternatural induration of the parts necessary to the circulation through the heart, may be the predisponent, if not the efficient cause, of this disorder.

IN most of Morgagni's observations, when he found the valves of the heart indurated or ossified, there is no satisfactory account of the symptoms which the patient had laboured under; on which account, the observations are

\* Vid. Morgagni de Causis & Sed. Morbor. Epist. 9. Art. 19. Epist. 23. Art. 8. Epist. 37. Art. 30. Ep. 48. Art. 38. and in many other places.



not of the use they otherwise would have been. However, I have met with one case, which is so much to our purpose, that I cannot help making some extracts from it. It is in his 23 Epist. Art. 8, 9.

“ Femina (inquit) paulo minoris  
 “ ætatis ac quæ novissime descripta est  
 “ [erat autem illa annorum 64] de  
 “ cordis palpitacione interdum, de spi-  
 “ ritus difficultate semper querebatur,  
 “ *multo autem magis de tanta ad cor*  
 “ *angustia atque anxietate, ut sæpius*  
 “ *quamprimum moritura videretur.*  
 “ Erant qui pericardio hydropicam  
 “ crederent. *Huic pulsus nunquam in-*  
 “ *termittentes.* Hydrops pericardii non  
 “ inventus est; *arteriæ magnæ val-*  
 “ *vulæ erant induratæ imo una ossea.*  
 “ Ipse autem arteriæ truncus, inte-  
 “ riore facie, passim ostendebat aliquid  
 “ ossei aut ad osseam naturam ver-  
 “ gentis \* \* \* & in proposita a nobis  
 “ muliere, præter osseam passim, aut  
 “ ad



“ ad offeam vergentem aortam, hujus  
 “ quoque valvulæ attendendæ sunt.  
 “ Quarum ut una erat offea, reliquæ  
 “ induratæ, ita minus sanguini ob-  
 “ sequentes, augere obstacula huic  
 “ exitum potuerunt, et contra, non  
 “ satis reditum intercludere eidem,  
 “ mox repulso a contrahente se magna  
 “ arteria; ut portio illius aliqua in  
 “ finistrum cordis ventriculum tunc re-  
 “ direct, quando hic alium venientem  
 “ a pulmonibus sanguinem debebat  
 “ excipere. \* \* Quæ res denique et  
 “ pulmonis et cor non prægravare non  
 “ poterat.”

It may be difficult to account satis-  
 factorily for the symptom above taken  
 notice of, where the pectoral muscle  
 is so particularly affected: but this ap-  
 pears to be merely spasmodic, and to  
 arise from an irritation on the nerves  
 of the thorax and heart \*. Perhaps  
 it

\* Morgagni observes, Epist. 4. Art. 22. that in  
 a certain divine, who used to point to his sternum as

it may throw some light on this affair, to consider that the nervi intercostales, or sympathetici, distribute many branches to the heart, arteria pulmonalis, and aorta; the other branches of the same nerves surround the subclavian arteries and veins, and communicate with the cervicales, which latter terminate at the insertion of the deltoid muscle into the os humeri, which is precisely the place affected by the spasm already mentioned\*.

I am, Sir, &c.

J. WALL.

the seat of his pain, this symptom proceeded from a disease in the great aorta, which lies deep in the breast under the bone.

\* Vid. Winslow's Anatomy.

III. Cases

III. *Cases and Remarks relative to Diseases of the Bones, by Mr. WALKER, Surgeon in Virginia; sent to Mr. ELSE, Surgeon to St. Thomas's Hospital; and communicated by HENRY HINCKLEY, M. D. Fellow of the College of Physicians, and Physician to Guy's Hospital.*

Read at the COLLEGE, Nov. 17, 1772.

IN the year 1757, I was sent for by Mr. Deshazer in the county of King William to a Negro boy; whose arm was much enlarged from the shoulder to some distance below the elbow; the part being hard and rigid. He was incapable of raising it in the least from the body without assistance, so that it hung a dead weight by his side. I was informed by the family, that he had a few months before received a fall from some height, and had



had hurt his arm considerably ; from which time he had not been able to use it. They suspected no fracture, and had treated it their own way.

THERE was a small ulcer a little below the head of the os humeri, which constantly discharged ; but I could not increase that discharge by any pressure I could make. I endeavoured several times in vain to trace with a probe the source of the matter. At last I found the probe slip down within the cavity of the os humeri ; and, by passing it as far as it would reach, I plainly perceived, that the sides of the bone were carious, and very ragged. I now was convinced, that the whole of the os humeri was a mere shell, or tube filled with matter ; which could not discharge itself freely, as the orifice was at the upper part of the bone, and concluded that there had been originally a fracture, and that the parts continued separated.

As

As the only means I could think of for relieving the boy was to make an aperture for a discharge of the matter, and the carious bone, I laid open the part from the humerus almost to the elbow; and then applied the trephine successively the whole length of the wound, taking care to unite the several perforations, as they followed each other, and with a small joiners gouge took off the angles between the perforations; which when I had done, the bone resembled somewhat an os humeri, sawed through longitudinally. I found their exfoliations within the bone, which I extracted; and I dressed the wound lightly with dry lint. From this time every thing went on successfully: the remains of the carious bone separated, the os humeri filled up with granulations, and the muscles recovered their proper use. In short the boy very soon got well, and has continued  
a healthy



a healthy Negro ever since, with the almost perfect use of his arm.

WITHIN these 20 years I have had several such cases under my care as Mr. Inett's, communicated by Dr. Hunter in the Medical Observations, vol. II. page 303, where the patient was cured by amputation\* ; and I can with truth assert that I never in one instance failed saving the limb. The cases I mean are those, in which a part of a diseased tibia is intirely separated, and covered over with a bony callous, which encompasses it in the form of a tube. My treatment has been, to lay open the tubular part, till I had room enough to extract the old bone: I then dressed with lint and digestive, and applied a bandage with some degree of pressure.

IN the year 1760 Mr. Joseph Eggleston of Amelia county brought

\* The common resource in these cases,



to me a Negro slave, the whole of whose under jaw was carious. After a tedious course of dressing and medicines, all the lower maxilla, excepting a small part of it at the chin, by degrees came away at the mouth in separate portions. What is very remarkable, though he lost all his teeth, and the two condyls came entirely away, together with a considerable part of the bone in large pieces, yet he recovered the perfect use of his jaw, and can with tolerable ease chew his victuals.

#### IV. *The*

IV. *The Consequences of a Crown-piece  
swallowed by an Epileptic Man. Com-  
municated to the College, by Dr.  
COYTE, of Yarmouth, Norfolk.*

Read at the COLLEGE, Nov. 11, 1773.

**M**R —, aged about 46, has  
been from his infancy subject  
to Epileptic Fits.

ON the 12th of March 1771, he  
was attacked with a very strong fit;  
and the people, who happened to be  
present, recollecting the custom of his  
introducing a crown-piece between his  
teeth, which he constantly carried  
about him, to prevent the tongue from  
being bit, as formerly had been the  
case whenever he had a return of these  
fits; with eagerness to serve him, let it  
slip down his throat. The Surgeon (Mr.  
Arnold of Lowestoff) was from home  
at the time this accident happened,  
but at his return found Mr. —  
in



in violent agony, complaining of being choaked, and of the impossibility of passing any thing into his stomach; whenever he endeavoured to swallow, he was greatly convulsed, and complained much of a pain in both his ears; at which time the crown-piece was so low in the œsophagus that it was impossible to get it back again: it remained only to pass it into the stomach, which with the concurrent advice of another surgeon (Mr. Turner of Yarmouth) was accomplished: his throat was inflamed and very painful for a long time, attended with the utmost difficulty in swallowing; his health after this was much as usual, tho' his fits were observed to be not so violent or frequent as before.

PREVIOUS to an illness which he had lately, and on which account I was consulted, he had occasion to be employed in fixing wine in deep vaults, and sometimes stood, as it were, upon  
his



his head, and complained soon after of a weight at his stomach, attended with a sickness, and a bitter taste in his mouth: thus he had continued for some days with a fever; and I found him on the 19th of Sept. 1772, feverish, languid and very sick at times, with a disagreeable bitter taste in his mouth; no emetick having been ventured on to remove the cause of his present disorders, which appeared to me to be chiefly owing to foulness in the stomach and primæ viæ; I ordered pulv. rad. ipecac. gr. ij. and waited the operation;—it puked him presently, and brought away a large quantity of viscid bilious matter, and, without giving him the least uneasiness, relieved him greatly: I left him, with directions to Mr. Arnold, to repeat the Ipecac. gr. ij. pro re natâ: it was repeated three times that day, and several times the day or two following; and his fever went off, and his health  
was

was returning; when, on the 26th of November, 1772, in the morning, he was very sick, and vomited several times, and in vomiting brought up the crown-piece without any pain, after it had lain in the stomach from the 12th of March, 1771, to the 26th of November 1772. Mr. — now enjoys a perfect state of health, and has had no return of the Epileptic Fits since that time.

Yarmouth (Norfolk),  
July 6, 1773.

P.S. The crown-piece appeared black, and somewhat corroded round one part of the edge and surface.

*V. The Method of preparing the Ginfeng Root in China. Communicated by Dr. HEBERDEN.*

Read at the COLLEGE, Nov. 11, 1773.

THE following account was communicated to John Burrow Esq. by a Mandarin, who had presided by the Emperor of China's order in that part of Tartary where the Ginfeng is gathered and cured. He allowed ours to be the same with theirs, and that they differed only in the curing, which, in the opinion of the Chinese, makes a very great difference in the virtue of this root. They suppose it to be a sovereign analeptic, and useful in almost all disorders. Their manner of infusing it is, to slice it into a vessel of cold water, which vessel is covered, and put into boiling water, where it soon becomes fit for use.



*To cure the Ginseng Root.*

GATHER the root sound and good (not in the season when the plant is in flower), and gently wash it from the earth, being careful not to break the skin. Then take an iron torch (that is, a very flat kind of stewpan, used in China over a charcoal fire); boil therein water; put in the root, and let it lie three or four minutes, but not so long as to injure, or break off the skin, when on cutting the root the inside will appear of a light straw colour. Then take a clean linen cloth, and, having wiped the Ginseng clean and dry, place the torch over the gentlest fire, and lay in it a row of Ginseng. Here let it dry gradually, turning it leisurely till it is something elastic, but not too dry. Afterwards take a damp, clean cloth, in which roll up the longest pieces in parallel lines, and wrap them up very tight, binding them hard round with thread. After being

dried a day or two by a very slow fire, unpack the same, and repeat the packaging of the inside and moist part, until it is all like the outside, and the whole dry enough to sound like a piece of wood when dropped upon a table. The heaviest pieces of a straw or light-brown colour are much the best.

*To preserve the same.*

TAKE a box well lined with lead, and put it into a larger one with quick lime (to prevent vermin), and close the whole against air and weather.

VI. *A Case of the Angina Pectoris, with an Attempt to investigate the Cause of the Disease by Dissection, and a Hint suggested concerning the Method of Cure.* By Dr. HAYGARTH, of Chester.

Read at the COLLEGE, Nov. 11, 1773.

ON Feb. 25, 1773, I was desired to visit a gentleman 48 years of age, rather corpulent, short necked, of a sedentary life, and much employed in writing. He had a pain in the middle of his sternum, so violent, as to occasion constant and loud complaints, with perpetual jactation in hopes of gaining relief by a change of posture. The pain was neither increased by inspiration, deglutition, the action of the pectoral muscles, nor external pressure on the part; he had no cough. He informed me that for three weeks he had felt a pain in this



part of the breast-bone, which he attributed to cold, or to more exercise of walking than he had been accustomed to. He observed that the pain ceased and returned suddenly, and that walking would always occasion a return of the pain. I could not learn that he had felt any symptom of fever, till the day before I saw him, when he had been seized with a severe shivering fit; his pulse beat very regularly, and now 96 times in a minute; his skin was not unnaturally hot: as the pain seemed so little connected with fever, its entire cessation with sudden returns induced me to think that the disorder was spasmodic. I ordered an anodyne draught, which was to be repeated every 2 hours, 2 or 3 times if the pain did not abate. A blister was also applied to the part. When I saw him early next morning, his pulse beat 120 times in a minute, full and strong. His pain continued  
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with unremitting violence, notwithstanding the anodynes, and the blister. I was now fully convinced that the pain was occasioned by, or accompanied with, an inflammation of the mediastinum, as the seat of the disorder was evidently in the thorax, and as every symptom was absent that could possibly prove either the lungs, trachea, œsophagus, pericardium, heart, or muscles of the thorax to be affected. Twelve ounces of blood were drawn immediately, which were covered with a thick, dense, and fizy crust. A draught of Camph. gr. x. Nitr. gr. xv. &c. was given every 4 or 6 hours. And he was directed to drink very plentifully of acidulated, diluting liquids. After using these remedies, he found immediate relief; and by continuing this method with a dose of Rochelle salts every second or third morning, his pain and fever in a few days entirely ceased. He gradually



recovered, nearly, if not perfectly, his former health and chearfulness. No remains of pain were felt in his sternum, for a short time after his recovery; he returned to his former way of life, by which he was much engaged in writing. But the pain by intervals began to be obscurely, and afterwards more severely felt: however, it never became so violent as to induce him to take any remedies to remove it, or to interrupt his business.

ON June the 4th, after supping moderately, and spending the evening with temperance, but with his usual chearfulness, notwithstanding the pain of his breast, of which he frequently complained, he went to bed between 10 and 11 o'clock, slept an hour, and awoke with a violent oppression of his breast, and retchings to vomit, soon succeeded by such a difficulty of breathing as made him apprehend an immediately fatal suffocation. He spat  
up



up with coughing a white, and thick, but not tenacious fluid, that is, one of a purulent appearance. In less than half an hour after this attack, when I saw him, his respiration was very short and quick, attended with a rattling noise in his throat; both these symptoms were relieved by coughing up, at intervals, this white thick liquor, which he said had no peculiar taste. His pulse was scarce perceivable, his skin cold with a clammy sweat. His strength gradually sinking, and breath becoming more laborious, in about three hours he died.

THE notion that the former attack about three months before, had been attended with an inflammation of the mediastinum, inclined me to think that the cause of this suddenly fatal event had been the discharge of this fluid from the mediastinum into the trachea, which thus occasioned suffocation.

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ON opening the thorax, the lungs, pericardium, and heart, appeared perfectly sound. But on dividing the mediastinum at the upper and lower part, there oozed out of both incisions a considerable quantity of thick white fluid of a purulent appearance, exactly similar to what he had expectorated. No particular cyst could be discovered; but the fluid seemed to be diffused through the cellular substance interposed between the membranes which form the mediastinum. I examined the trachea, in hopes of finding an aperture, through which the fluid had passed; but was doubtful whether an opening, which had some appearance of laceration, might not have been made by the dissector's knife; however, on dividing the trachea, it manifestly contained a fluid of the like purulent appearance, as was found in the mediastinum, and had before been expectorated.

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THE nature of this fluid seems extremely doubtful. Its consistence and colour was that of pus, yet the symptoms which usually attend its formation, and denote its presence in the body, were never observable during the whole progress of the disease. He had suffered no hectic fever, no wasting of flesh, no night-sweats. No mark of inflammation had appeared during the whole disease, except that violent attack above described three weeks after his first complaints began, and three months before their fatal termination.

CAN pus be lodged in the body without producing hectic symptoms, when entirely secluded from the atmosphere? Every practitioner must have observed, that when the source of a purulent discharge is exposed to the air, hectic symptoms become more violent, as in the instance when a lumbar abscess is opened, or there is an open ulcer in the lungs: yet an occult sup-  
puration



puration in any part of the body is so generally known to produce hectic symptoms, that I do not recollect any clear instance of the contrary. Had this fluid been collected in the mediastinum from the beginning of the disease, which was near four months, or from the violent attack of fever three months before his death, or from what other period of the disease? If future dissections discover that similar symptoms are *always* occasioned by a fluid collected in the mediastinum, would not a perforation of the sternum and a discharge of this fluid appear to be a very safe, and probably a very efficacious cure?

WHEN we compare in this case the situation and violence of pain, its perfect intervals, and sudden returns, the age and habit of the patient, with that description of a disorder of the breast called the *angina pectoris*, in the 2d Vol. of Medical Transactions, no  
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one can reasonably doubt the identity of the disease. Within the space of two years I have seen two other cases with similar symptoms, both of which proved suddenly fatal. From these facts I am inclined to believe that this disorder of the breast is not extremely rare, and of very great importance in regard to the danger with which it is attended, although it has passed unnoticed till lately by medical writers.

I AM inclined to suspect, that the sudden death occasioned by the *angina pectoris*, has frequently been attributed by inaccurate observers to gout in the stomach; the age and habit of persons liable to both diseases are the same. As the mediastinum is a part of the body in no respect essential to life, it has probably been very seldom examined by dissection for the cause of death. The symptoms in the case above related, distinctly pointed out this partition of the thorax as the seat of

of the disease, and prompted me to examine it particularly by dissection. No practical inference can reasonably be deduced from a solitary example, but it will I trust be sufficient to excite those who have future opportunities of inquiry, to confirm or confute what is here conjectured to be the cause, and suggested as the cure, of the *angina pectoris*.



VII. *Of the Use of fermenting Cataplasms in Mortifications. Communicated to the College by JOHN POWER, Surgeon in Polesworth.*

Read at the COLLEGE, Nov. 11, 1773.

GENTLEMEN,

**A**BOUT the beginning of July 1770, I was called to the assistance of a gentlewoman of this town, aged 67 years; she was of a thin relaxed habit of body, and her natural strength much decayed: at this time a mortification was beginning in the end of her great toe, which did not succeed any other disorder or accident.—The bark, red wine, opiates, volatile and cordial medicines, were therefore freely administered. Cataplasms, with the bark, opiates, and aromatics, were frequently applied externally;

ternally; vinous, and spirituous stupes were likewise used; but before the end of September all the toes on the affected foot were perished; and the mortification kept advancing slowly, with a livid appearance spreading as high as the ankle: which gave me very little hopes of her recovery, especially as she grew tired of all medicines.—But as I had successfully preserved dead flesh for many months by keeping it in fixable, or new generated air, (according to the discovery of Dr. Macbride,) I determined to try the effect it would have by an external application in this case, expecting the putrid effluvia of the gangrened parts (on which there is great reason to believe the spreading of all gangrenes depend) might be corrected, or in some part destroyed, by the fixable air. A cataplasm was therefore directed of such ingredients as I thought best adapted to ferment by  
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the addition of some yeast, as wheat flower, honey, and water; these were mixed into a thin paste; and set by the fire till they began to ferment, and were then applied, nearly cold, once a day for ten days, when to my great satisfaction the mortification was stopped, and the putrid stench abated; the cataplasms were continued till the dead toes became loose, and were removed, when common digestives and defensative plasters were substituted in their place; the fore began to discharge good matter, put up new flesh, and had a favourable appearance. But accidentally one night about the end of November she got her dressings off, and lay with the stump exposed to the cold air; in the morning I found the stump black and dry. I dressed it with warm soft digestives, and covered them with the *Theriaca Londinensis*: but could not get any discharge from it, the mortification having again taken



place; and reached in a few days the thick part, or middle of the foot. The smell becoming again intolerable, the fermenting cataplasms were applied as before; and all the livid appearance, which spread a hand's breadth above the ankle, was also covered with them; and in a few days, I was thoroughly satisfied the mortification was again stopped; though her appetite was greatly decayed, and her strength much exhausted. The cataplasms were continued till the beginning of March 1771, when the dead parts separated about the middle of the metatarsal bones, almost as even as if they had been taken off with a saw, and were removed with the dressings without the loss of a tea-spoon-full of blood. From this time the sore healed kindly, though remarkably slow; she began to recover her appetite and health, which she still retains.

SINCE

SINCE the above case, I have seen the good effects of fixed air, applied nearly in the same manner, (adding sometimes a little *cort. Peruv.* or *inct. Thebaic.* to the cataplasms) in a beginning mortification on the leg of an old gentleman, attended with swelling and blackness about his foot and ankle; with a livid appearance running up the side of his leg, and many large vesications upon the foot, which never grew any larger, nor more in number, after the fermenting cataplasms were applied; but healed, or dried up, soon; the swelling abated, and the blackness disappeared in a few days; and in a fortnight he was able to walk about, and still continues well.

I HAVE also used the fermentable cataplasms, with some advantage, to foetid foul ulcers, where I have suspected the absorption of the foetid matter to be prejudicial to health.



QUERY, Is not fixed air a weak acid?—If so, it is not surprizing that it should resist putrefaction, as all other acids have been long known to do; but its greater fluidity enabling it to penetrate further into soft bodies, and its causticity being so small, renders it both more efficacious, and more convenient for counteracting putrefaction in living bodies.

THE acid nature of this fluid appears from its uniting with *caustic calcareous earth*, and producing those crystals called dogtooth spar.

WITH *caustic fixed alkalies*, it crystalizes, and produces *mild fixed alkalies*.

WITH *caustic volatile alkalies*, it crystalizes, and produces *mild volatile alkalis*: and from all these bodies it is dispossessed by stronger acids.—It further appears to be an acid, from its dissolving the iron in chalybeate waters.



I BEG leave to add that this fixed or fixable air (if a weak acid) is the most universal acid in nature, as not only all limestone, chalk, marble, and marles are replete with it; but it makes up a great part of the composition of all animal and vegetable bodies, and floats in great abundance in the atmosphere: as appears from the experiments of procuring fixable air from all these bodies, by fermentation, or by the addition of stronger acids, by burning charcoal, and lastly from the scum which is almost instantly produced on lime water exposed to the air, which is a re-production of limestone. I am, Gentlemen, with great respect,

Your very humble servant,

JOHN POWER.



